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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/765,384

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Vineet Kumar Sarin

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KOPPEL, PATRICK, HEYBL & DAWSON
2815 Townsgate Road
SUITE 215
Westlake Village, CA 91361-5827

EXAMINER

GEORGE, TARA R

ART UNIT

PAPER NUMBER

3733

MAIL DATE

DELIVERY MODE

04/28/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/765,384	Applicant(s) SARIN ET AL.	
	Examiner TARA R. GEORGE	Art Unit 3733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/26/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kienzle, III (US 2002/0077540A1) in view of White US 2003/0105470) further in view of Horbal et al. (5249581).

With respect to claim 8, Kienzle discloses a system for measuring and assessing the skeletal geometry of a hip joint during surgery, suitable for surgical navigation of a hip arthroplasty operation, comprising: a locating system which determines positions and orientations of trackable markers (see para. 12); a computer, interfaced to said locating system to receive tracking data, and calculating from said tracking data the positions of tracked objects in relation to a generic computer model of a patient's hip geometry (see para. 12 and para. 15 lines 14-20); a software module, executable on said computer, which defines the patient's pelvic plane without reference to previously obtained radiological data, by locating at least three pelvic landmarks (see para. 16); and a pelvic tracking marker, fixable to the pelvic bone and tracked by said locating system, to track in real time the orientation of said pelvic plane (see para. 45-46).

Kienzle discloses the invention as claimed, including the use of femoral tracking markers wherein said marker is securely attachable to a femur of the patient and

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trackable by said locating system to detect changes in leg length and femoral offset.

Kienzle is deficient in teaching a non-penetrating means for securing said femoral tracking marker to the femur of the patient. White teaches a non-penetrating means (see para. 55 and fig. 11) for securing a femoral tracking marker to the femur of the patient in order to provide a non-invasive means of attaching a marker to a patient. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the femoral tracking marker of Kienzle with the a non-penetrating means for securing a femoral tracking marker to the femur of the patient in view of White in order to provide a non-invasive means of attaching a marker to a patient.

Kienzle in view of White teaches the claimed invention except for determining positions and orientations of optically trackable markers without reference to previously obtained radiological data. Horbal teaches the step of determining positions and orientations of optically trackable markers without reference to previously obtained radiological data in order to provide the surgeon with graphic pictures of the bones during surgery (col. 1 lines 36-63). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Kienzle in view of White in order to provide the surgeon with graphic pictures of the bones during surgery. It is also noted that while the combination of Kienzle, White and Horbal does not appear to teach three optical tracking references, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the assembly of Kienzle, White and Horbal having a plurality of bushings, since it has been held that mere duplication of the

essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

As for claim 10, Kienzle further discloses the system of claim 8, further comprising a trackable acetabular navigation tool, capable of fixation to an acetabular shell implant; and wherein said software module calculates the relationship between said navigation tool and a real time orientation of said pelvic plane, and displays said relationship, to facilitate establishing proper geometry of said shell implant during surgery (see para. 47).

With respect to claim 11, Kienzle further discloses a trackable, manual probe for acquiring the positions of said pelvic landmarks, and wherein said software module defines said pelvic plane from at least three and not more than four pelvic landmarks (see para. 45-46).

With respect to claim 1, the combination of Kienzle in view of White further teaches with a trackable probe, locating points on said acetabular implant; based on tracked location of said at least three points, calculating an orientation of said acetabular implant tool; and comparing the calculated orientation of said acetabular implant to said desired orientation to verify proper orientation of the acetabular implant (see para. 60-62 of White). While White does not appear to specifically teach locating three superficial points, it is noted that it would have been obvious to one having ordinary skill in the art at the time the invention was made to locate at least three points on the said implant to better verify proper orientation, since it has been held that

discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

As for claims 2 and 4, it is noted that the method is disclosed above.

As for claim 3, Kienzle discloses the method of claim 2 wherein said anatomical pelvic features comprise at least three of an ipsilateral anterior superior iliac spine, a contralateral anterior superior iliac spine, an ipsilateral pubic tubercle, and a contralateral pubic tubercle (see para. 45).

It is noted that claims 5 and 7 have been taught above.

As for claim 6, is note that the combination of Kienzle in view of White teaches the invention was claimed except for the trackable marker secured to said femur by a clamp mounting said trackable marker. It is noted that White, as stated above, teaches a non-invasive patch used to securely hold the marker to the patient (see White fig. 11 and para. 55). The use of a patch to non-penetratingly hold a marker is equivalent is function to a clamp that is used to non-penetratingly hold a marker. The substitution of the patch of White with a clamp would have been obvious to one of ordinary skill in the art at the time of the invention.

Response to Arguments

Applicant's arguments with respect to claims 1-8, 10 and 11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TARA R. GEORGE whose telephone number is (571)272-3402. The examiner can normally be reached on M-F from 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached on (571) 272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. R. G./
Examiner, Art Unit 3733
/Eduardo C. Robert/
Supervisory Patent Examiner, Art Unit 3733